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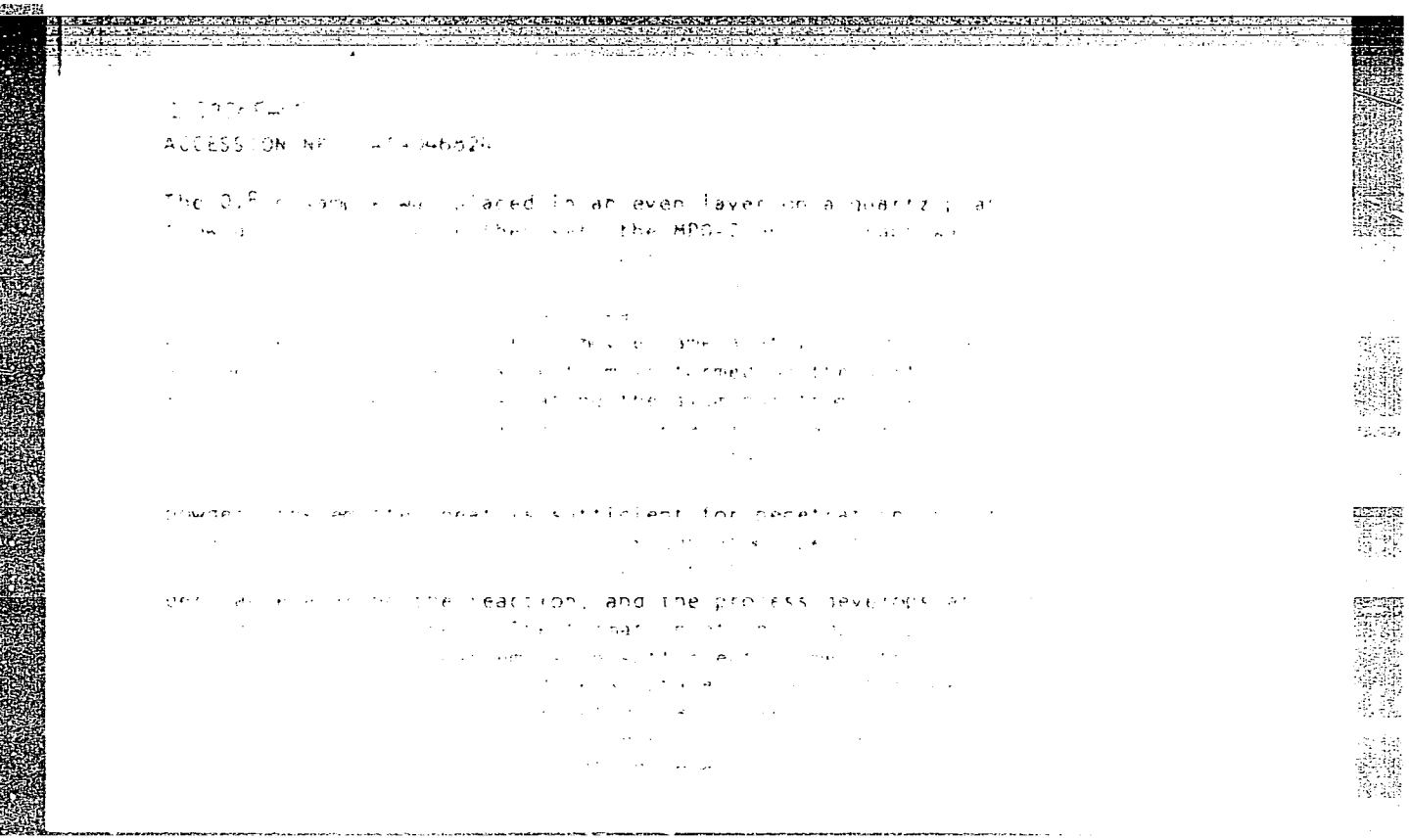

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ACCESSION NR: AT4046824

the external pressure there is an explosion and the alumin[illegible]

[illegible] P-3 and [illegible]
[illegible] aluminum [illegible] taking part in the oxidation was [illegible]
[illegible] 54% for P-3 and 51% for P-4. [illegible]
[illegible] process much better than the other [illegible]
tests [illegible] that P-1, P-3 and P-4 aluminum powders [illegible]
[illegible] forming a [illegible]
[illegible] molten powder, evaporates [illegible]
[illegible]

ASSOCIATION: none

SUBMITTED: 16Jun64 ENCL: 01 SUB CODE: MM

Card 3/4 NO REF SOV: 001 OTHER: 000

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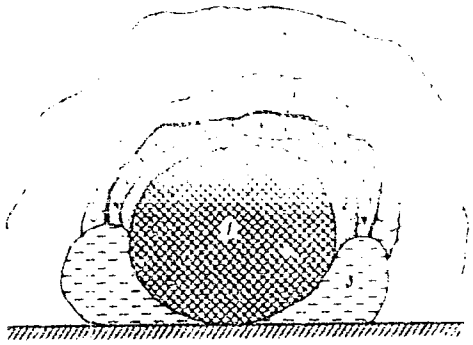

Fig. 1. Schematic cross section through a drop of liquid aluminum:
1 - Al drop; 2 - Al vapor; 3 - molten Al_2O_3; Al_2O_3 [illegible]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

1. DOBROKHOTOV, M.A.

2. USSR (600)

4. Squirrels--Yakutia

7. Flying-squirrel and squirrel, Priroda, 42, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M. N.

Assembly, painting, factory testing, and packing of agricultural machinery
Moskva, Gos. nauchntekhn. izd-vo mashinostroitel'noi lit-ry 1951. 299 p.

1. Agricultural machinery

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

[redacted]

USSR/ Minerals - Ore deposits

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M. K.

"Problem of the Genesis of Rich Ores of the Krivoy Rog Type", Razvedka i Okhrana Nedr, No 1, 8-15, 1954.

The author presents some reports on the genesis of the rich iron ores of the Kremenchug deposits, which are possibly disseminated also in the rich iron ores of the central part of the Krivoy Rog basin. Close to the deposits all the ferrous rocks have been subjected to very strong changes as expressed in their intense oxidation. Because of this the martite differences of the ferrous quartzites have acquired predominant significance. The ores can be divided into 6 kinds: martite, ferro-micaceous martite, hydrohematite, hydrohematite-martite, chlorite-martite, carbonate-martite. (RZhGeol, No 5, 1954)
SO: Sum. No. 443, 5 Apr. 55

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.

New variety of chlorite from ferruginous quartzites of the Galeshchinskoye deposit in Kremenchug District. Min.sbor. no.11:295-302 '57. (MIRA 13:2)

1. Ukrainskoye geologicheskoye upravleniye, Kiyev.
(Kremenchug District--Chlorites)

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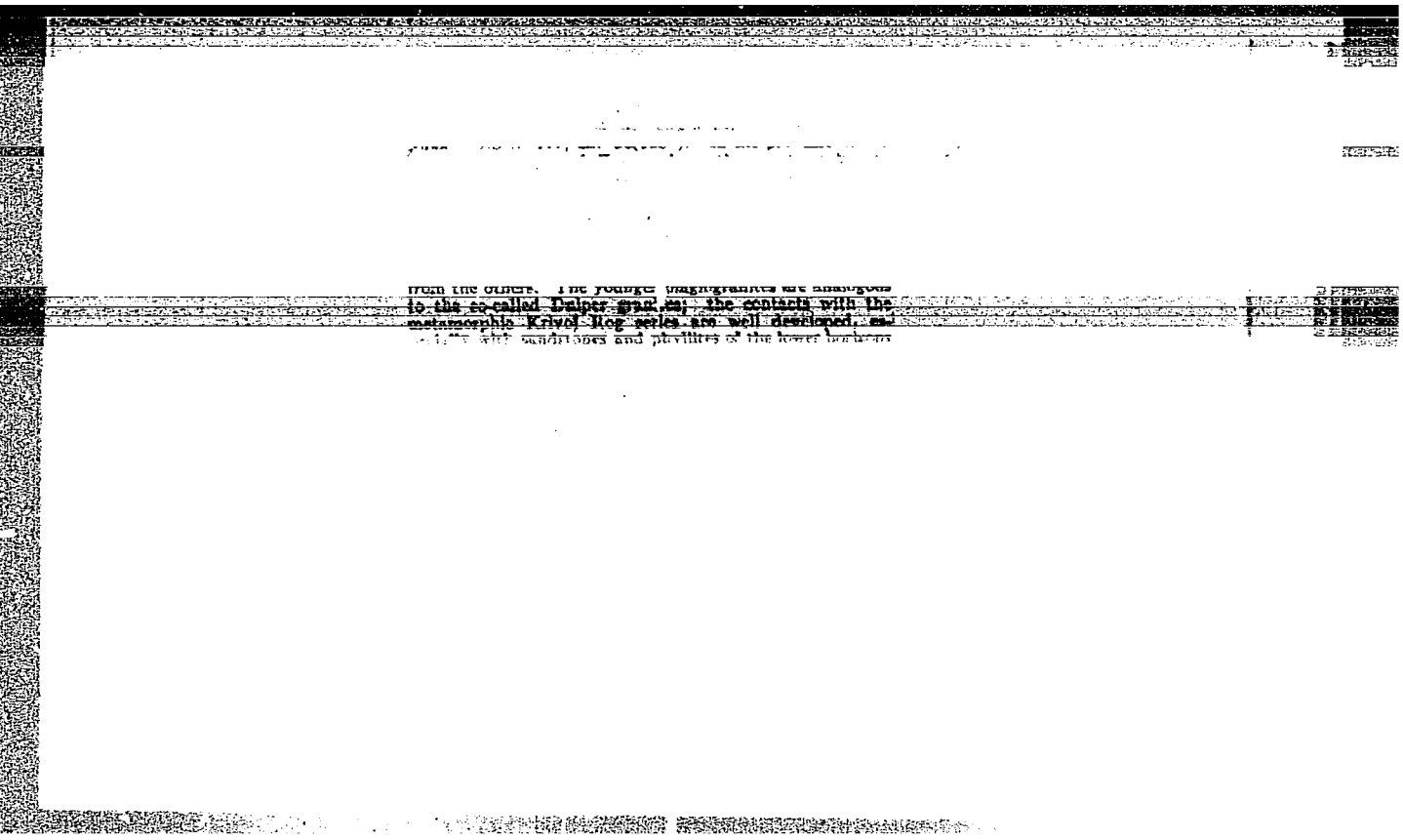

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

127-58-1-3/26

AUTHOR: Dobrokhotov, M.N., Chief Geologist of the Kremenchug Expedition

TITLE: Iron Ores of Kremenchug Magnetic Anomaly (Zheleznyye rudy Kremenchugskoy magnitnoy anomalii)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 1, pp 10-15 (USSR)

ABSTRACT: The Kremenchug magnetic anomaly belongs to the same structural tectonic zone as the magnetic anomalies of the Krivoy Rog basin, being actually their extension to the north. Its total length is 45 km and its area (within the circumference of the 10,000 gamma isoline) amounts to about 23 sq km. The peak values of the vertical component of the Earth's magnetic field amount to 80,000 gamma in the southern extremity. The crystalline foundation of the Kremenchug magnetic anomaly territory is of various igneous and metamorphic rocks. Among the latter, the Krivoy Rog metamorphic series has three formations, the middle of which is about 1.5 km thick. In this formation, the strata K_2^3, K_2^5 and K_2^1 are of the most practical importance. They consist of magnetite and cummingtonite magnetite quartzites containing approximately 35% iron. The tests have estab-

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lished the possibility of extracting high-quality concentrates from these quartzites by the magnetic-separation method. A series of large deposits at Galeshchino contain rich iron ores, most of which are in the form of ferruginous quartzites of the K_2^2 strata. The average chemical composition of these ores is as follows: 60.52% of Fe; 10.09% of SiO_2; 0.017% of S and 0.043% of P. These rich ores of the Galeshchino deposits represent hypergenous formations which originated under conditions of an ancient erosional crust. The size of the ore areas ensures an annual output of 4 to 5 million tons. However, the mining of this deposit will be somehow complicated by difficult hydrogeological conditions, though experimental drainage has shown that the deposit can be dried prior to the start of mining. The resources of magnetite quartzites in the Kremenchug magnetic anomaly territory are estimated to be many hundred millions of tons. Within the boundaries of the Gorishni Plavni deposit, ferruginous quartzites have been traced in a 3-km long extension, 150 m thick. On the basis of the prospected resources of the Gorishni Plavni deposit (Table 2), it is planned to construct the Dneprovskiy mining-concentration combine with a capacity of

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5.0 million tons of high-quality concentrate per annum. The author estimates that the Galeshchino and Gorishni Plavni deposits can yield annually up to 15 million tons of ore and concentrates. Production of the concentration plants can be transported downstream on the river to the plants in the Dnepr' area. The new mines and plants can be supplied with electric power from the Kremenchug and Dneprodzerzhinsk hydropower plants now under construction.
The article contains 2 maps, 3 geologic cross sections and 2 tables.

ASSOCIATION: Kremenchugskaya ekspeditsiya (Kremenchug Expedition)

AVAILABLE: Library of Congress

1. Iron ores-Sources 2. Iron ores-Availability-USSR

Card 3/3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.

3(5)

PHASE I BOOK EXPLOITATION SOV/2248

Semenenko, Nikolay Panteleymonovich, Nataliya Ivanovna Polovko, Yakov Mikhaylovich Gritskov, Mikhail Nikolayevich Dobrokhotov, Anna Aleksandrovna Makukhina, Viktoriya Danilovna Ladiyeva, Georgiy Viktorovich Zhukov, and Andrey Andreyevich Nastenko.

Geologiya zhelezisto kremnistykh formatsiy Ukrainy (Geology of Ferruginous-Silicified Formations of the Ukraine) Kiyev, Izdvo AN USSR, 1959. 687 p. Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut geologicheskikh nauk.

Eds: S.P. Rodionov, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.N. Zaviryukhina; Tech. Ed.: Ye. N. Rozentsveyg.

PURPOSE: This book is intended for industrial and research geologists, teachers and advanced students of geology.

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COVERAGE: The book, a collection of articles, deals with the stratigraphy, tectonics, and composition of ferruginous silicified formations of the central and eastern parts of the Ukrainian crystalline massif. It interprets the distribution of ferruginous-silicified formations and analyzes sample cross-sections in various structural-facies zones. Individual chapters contain a detailed description of the geological structure of the Pravoberezhnyy, Kremenchugskiy, Verkhovtsevskiy, Konkskiy, Zapadnopriazovskiy and Gulyaypol'skiy regions. There are 212 tables and 82 figures. There are 83 references: 81 Soviet, 1 English, and 1 German.

TABLE OF CONTENTS:

Foreword 3

Ferruginous-Silicified Formations, Their Composition and Position in the Central Part of the Ukrainian Crystalline Massif (N.P. Semenenko)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.; POLISHCHUK, V.D.; ZAYTSEV, Yu.S.

Stratigraphy of the Kursk metamprphic series. Mat. po geol. i pol. iskop. tsentr. raipn. evrop. chasti SSSR no.2:17-27 '59. (MIRA 13:9)

1. Belgorodskaya zhelezorudnaya ekspeditsiya.
(Kursk Magnetic Anomaly--Geology, Stratigraphy)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N. ; SCHSCHERBAKOVA, K.F. ; KHALLO, V.F. ; GUZENKO, G.F.

Iron ore formation and iron ore deposits in the Belzerka areas in the lower Dnieper Valley. Geol. rud. mestorozh. no.6:12-29 N-D '60. (MIRA 14:3)

1. Dnepropetrovskaya ekspeditsiya Ukrainskogo nauchnoissledovatel'skogo geologorazvedochnogo instituta, Dnepropetrovsk.
(Dnieper Valley—Iron ores)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

VAYNSHTEYN, Boris Grigor'yevich. Prinimal uchastiye DOBROKHOTOV, M.N., kand.geolog.nauk. SOSEDOV, O.O., otv.red.; BYKHOVSKAYA, S.N., red.izd-va; SUKHININA, N.D., tekhn.red.; SHKLYAR, S.Ya., tekhn.red.

[Kursk Magnetic Anomaly is the largest iron ore center of the U.S.S.R.] Kurskaia magnitnaia anomaliia - krupneishaia zhelezorudnaya baza SSSR. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 105 p. (MIRA 14:6)
(Kursk Magnetic Anomaly—Iron ores)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.

Geology of the Pre-Cambrian in the Kursk Magnetic Anomaly. Sov.geol. 4 no.11:37-54 N '61. (MIRA 14:11)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.

(Kursk Magnetic Anomaly--Geology)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.; GALENZOVSKAYA, V.I.

Tufogenic rocks in the upper formation of the Krivoy Rog Series.
Dokl. AN SSSR 144 no.5:1144-1147 Je '62. (MIRA 15:6)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.
Predstavleno akademikom D.S.Korzhinskim.
(Krivoy Rog Basin--Geology, Stratigraphic)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.

Paragenesis of supergene minerals in high-grade iron ores of the Kremenchug region. Kora vyvetr. no.5:68-86 '63.
(MIRA 16:7)

1. Dnepropetrovskaya ekspeditsiya Ukrainskogo nauchno-issledovatel'skogo geologorazvedochnogo instituta.
(Kremenchug region--Iron ores)
(Paragenesis)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N.; SHIFRIN, D.V., nauchn. red.

[Geology and iron ore deposits of the Kremenchug region] Geologiia i zhelezorudnye mestorozhdeniia Kremenchugskogo raiona. Moskva, Nedra, 1964. 220 p. (MIRA 17:10)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, M.N. [Dobrokhotov, M.M.]

Stratigraphy of the Early Pre-Cambrian in the middle Dnieper Valley. Geol. zhur. 24 no.2885-93 '64 (MIRA 18:2)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, N. D.

"Gas-Dynamic Schemes of Discharge from the Nozzle of a Rocket Engine Under Non-Design Pressures (1947)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, N.N., akademik

Ways of increasing the productivity of open-hearth furnaces. Met. i gornorud. prom. no.6:12-14 N-D '62. (MIRA 17:8)

1. AN UkrSSR.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, N.N. akademik [deceased]

Near future of the open-hearth steel production process.
Met. i gornorud. prom. no.1:18-20 Ja-F '64.
(MIRA 17:10)

1. AN UkrSSR.

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DOBROKHOTOV, S.

Speed up building of elevators and granaries. Muk.-elev. prom. 20 no.4:3-5 Ap '54. (MLRA 7:7)

1. Ministerstvo zagotovok SSSR.
(Grain elevators) (Granaries)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, S.M.

Cordierite from Berdichev granite. Geol. zhur. 24 no.1:68-70 '64.
(MIRA 18:7)

1. Institut geologicheskikh nauk AN UkrSSR.

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DOBROKHOTOV, S.N.

Technical and economic basis of road construction in machine-tractor station zones. Avt.dor. 18 no.2:27-29 Mr-Ap '55
(Road construction) (MLRA 8:6)
(Machine-tractor stations)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

VIKTOROV, Vasiliy Mikhaylovich; DOBROKHOTOV, S.N., red.

[Economic surveys of transportation centers] Ekonomicheskie izyskaniia transportnykh uzlov. Moskva, Transport, 1964. 174 p. (MIRA 18:3)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

8(6), 14(6) SOV/143-59-6-9/21

AUTHOR: Dobrokhotov, V.D., Engineer

TITLE: The Investigation of Losses in the Gaps of the Velocity Stage

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 6, pp 61-65 (USSR)

ABSTRACT: The author conducted an experimental investigation of losses in the gaps of two turbine velocity states distinguished by different propagation of the temperature drops along the rims with full admission with the working medium. The experiments were conducted at a test stand of TsKTI. Air was used as a working medium at M = 0.85-0.9 and $R_e = 10 \times 10^5$. The tests were performed under the following conditions: 1) radial seals were installed on all rims; 2) radial seals were removed: a) from the first rim; b) from the first and second rim; c) from all rims. The magnitudes of axial gaps of the stages remained unchanged. Results of the experiments are shown in graphs, figure 2 and 3. These data show that the velocity stage efficiency

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installing radial seals on the rotor rims depend on the degree of reactivity of the given rim and the magnitude of their relative power. The efficiency increase caused by radial seals installed on the intermediate guide vanes with a degree of reactivity of the given rim of 15% is 1.0-1.5%. When installing radial seals, in the area of $\frac{u}{c_0} < \left(\frac{u}{c_0}\right)_{opt}$, the efficiency increase is essentially reduced. Radial seals lead to an increase of the degree of reactivity in the rim on which they are installed. Thereby the degree of reactivity in the subsequent rim is somewhat reduced. The author then presents an approximated calculation of losses in the gaps of the velocity stage.

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SOV/143-59-6-9/21

The Investigation of Losses in the Gaps of the Velocity Stage

There are 3 sets of graphs, 1 diagram, 1 table and 4 Soviet references.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut imeni I.I. Polzunova (Central Boiler and Turbine Institute imeni I. I. Polzunov)

PRESENTED: Nauchno tekhnicheskaya sektsia (Scientific Engineering Section)

SUBMITTED: February 17, 1959

Card 3/3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

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~~8(6)~~ 10.6000 SOV/143-59-8-11/22

AUTHOR: Dobrokhotov, V.D., Engineer

TITLE: An Investigation of Energy Losses in Connection With Partial Admission in the Velocity Stage

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1959, Nr 8, pp 62-67 (USSR)

ABSTRACT: For obtaining experimental data on the influence of the ratios of the magnitude of active arcs of the nozzle and intermediate guide systems and their mutual position, the author conducted investigations of a velocity stage, whose geometrical characteristics are listed in Table 1. The flow section of this stage is shown in Figure 1. Experimental data on the influence of the different designs of the partial admission and the influence of the magnitudes of the mutual displacement of active arcs of nozzle and inmediate guide systems on the work of the velocity stage were not yet established. Available data on energy losses, caused by partial admission were ob-

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An Investigation of Energy Losses in Connection With Partial Admission in the Velocity Stage

tained for a velocity stage with open channels of the intermediate guide system. It was established that the effectiveness of such a stage depends on the ratios of the magnitudes of the active arcs of the nozzle and intermediate guide systems as well as their mutual position. Especially, in the stage under investigation, the difference of the maximum magnitudes η_{ol} for $\varepsilon_{H.A.}$ = 0.28 (A = 20 mm; B = 70 mm) and $\varepsilon_{H.A.}$ = 1.0 amounts to 2.4% at ε = 0.26. The different designs of the partial admission cause essential changes in the reaction values of the blade system of a turbine stage. The investigation was performed under the guidance of Candidate of Technical Sciences, Docent N.M. Markov. The paper was presented at the Prezidium nauchno-tekhnicheskoy sektsii turbomashin (Presidium of the Scientific-Technical Section for Turbines). There are 2 diagrams, 6 graphs, 2 tables

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SOV/143-59-8-11/22

An Investigation of Energy Losses in Connection With Partial Admission in the Velocity Stage

and 4 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut imeni I.I. Polzunova -TsKTI-
(Central Scientific Research Institute for Boilers and Turbines imeni I.I. Polzunov)

SUBMITTED: April 24, 1959

Card 3/3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V. D., Cand Tech Sci -- (diss) "Research into degrees of speed with two rims of working blades." Leningrad, 1960. 16 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Leningrad Polytechnic Inst im M. I. Kalinin); 170 copies; price not given; (KL, 26-60, 135)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

MARKOV, N.M., kand.tekhn.nauk; DOBROKHOTOV, V.D., inzh.

Results of investigation of velocity stages. Energomashinostroenie 6 no.5:21-23 My '60. (MIRA 13:9)
(Steam turbines)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.D.

Operation and efficiency of a compressor station with double-stage centrifugal pumps. Gaz. delo no.3:26-29 '61. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

ALEKSANDROV, A.V.; DOBROKHOTOV, V.B.

Evaluating the efficiency of the operation of the compressor stations of gas pipelines. Gaz. prom. 8 no.1:[illegible] '63
(MIRA 17:7)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.D.; KLUBNICHKIN, A.K.; LEONT'YEV, Ye.V.

Certain conditions for the operation of compressor stations with centrifugal pumps. Trudy VNIIGAZ no.21/29:96-112 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.D.

Foreign technology. Gaz. prom. 8 no.7:53-56 '63.
(MIRA 17:8)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V. I.

21933 DOBROKHOTOV, V. I. Uspekhi akkdimatizatsii nekotorykh promslovykh vidov ryb v vodoyemahb kazakhstana. (Doklad na nauch. konferentsii In-ta zoologii Akad. nauk Kasakh. SSR, posvyastch. 30-letiyu Belikoy oktyabr'skoy sots revolyutsii, 6. dek. 1947g.) Isvestiya Akad. Nauk Kazakh. SSR, No. 63 Seriya Zool., vyp. 8, 1948, s. 3-31-Rezyume na Kazokh. yaz.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.I., inzh.

Operational indices of a shaft mill with tangentional air feed. Teploenergetika 8 no.11:43-45 N '61. (MIRA 14:10)

1. Gosudarstvennyy trest po organizatsii i ratsionalizatsii elektrostantsiy.

(Coal, Pulverized)
(Furnaces)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

BOYKO, Yu.A., inzh.; DOBROKHOTOV, V.I., inzh.; KISEL'GOF, M.L., kand. tekhn.nauk; PATYCHENKO, V.S., inzh.; POGORELOV, B.F., inzh.; TARELKIN, M.F., inzh.

Burning of lignite with a high moisture content. Elek. sta. 36 no.2:8-12 F '65. (MIRA 18:4)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

41345

S/081/62/000/017/010/102
B166/B180

18 9500

AUTHORS: Naboykin, Yu. V., Dobrokhotova, V. K., Uglanova, V. V., Soyfer, L. M.

TITLE: Growing organic single crystals with admixtures and a study of their optical properties

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 34, abstract 17B204 (In collection: Rost kristallov. v. 3. M., AN SSSR, 1961, 326-331. Discuss. 501-502)

TEXT: A number of mixed organic single crystals based on naphthalene and diphenyl were prepared and their scintillation properties examined. The possibility of practical application of some of these single crystals in scintillation counters is shown and reasons for the concentration quenching of the scintillations are established. In some cases the actual concentration of impurity in the solid phase and the impurity distribution along the growth axis of the single crystal are determined. It is noted that the solubility of the admixture in

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Growing organic single crystals ...

the single crystal depends upon the dimensions and shape of the molecules of both the base and the admixture. In molecular crystals grown from the melt impurities usually enter the crystal lattice in the form of individual molecules. [Abstracter's note: Complete translation]

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NABOYKIN, Yu.V.; DOBROKHOTOVA, V.K.; UGLANOVA, V.V.

Luminescence yield of mixed single crystals as a function of the impurity concentration. Opt.i spektr. 12 no.5:649-651 My '62. (MIRA 15:5)

(Luminescence) (Crystal lattices)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V. M., and BOGOYAVLENSKAYA, N. V. (USSR)

"Aerobic Metabolism and Mitotic Activity in Cornea and Intestinal Mucous Membrane in Rats."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 Aug 1961

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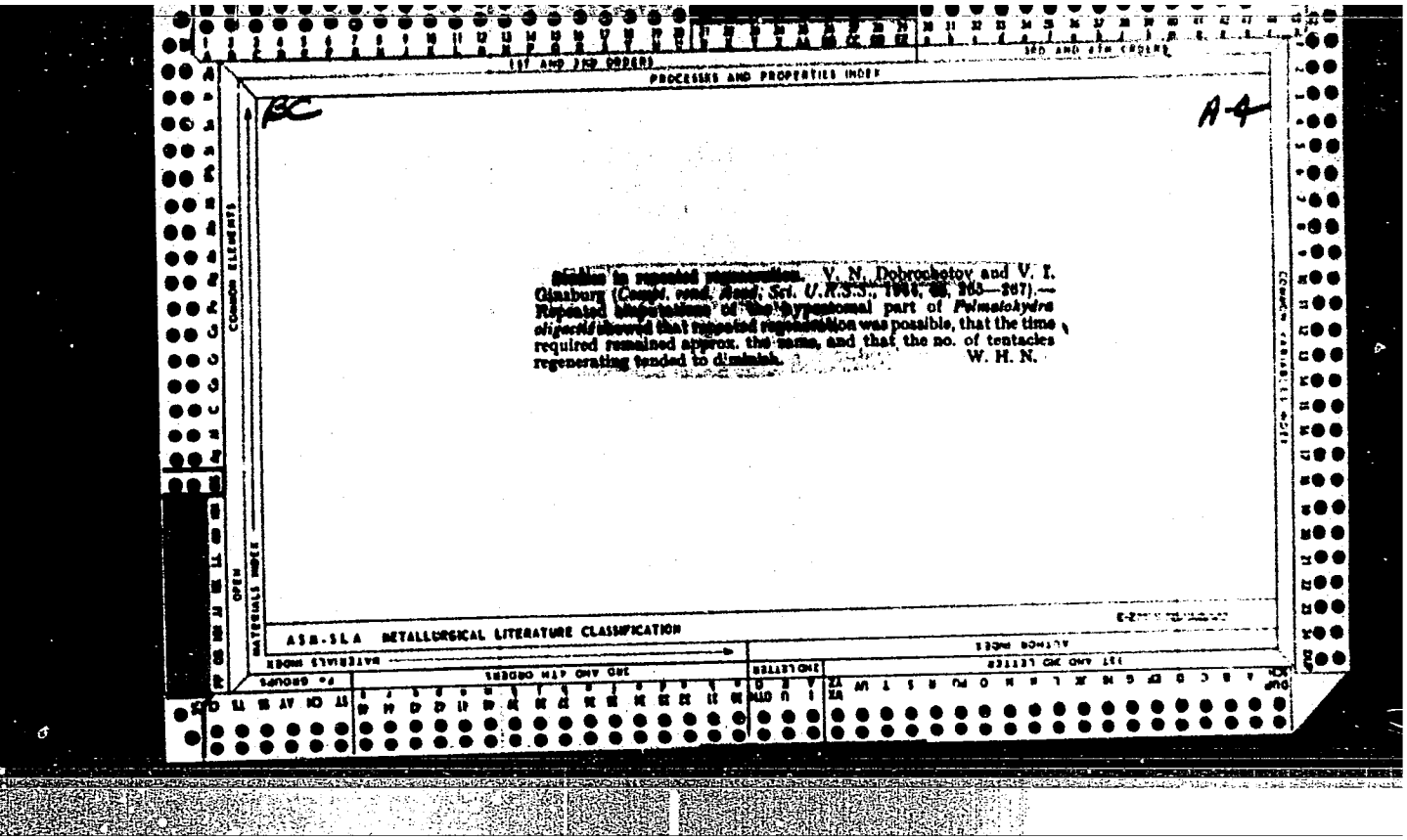

Stability in repeated regeneration. V. N. Dobrochotov and V. I. Glazburg (Compt. rend. Acad. Sci. U.R.S.S., 1946, 52, 263—267).—Repeated amputations of the hypostomal part of *Pelmatohydra oligactis* showed that repeated regeneration was possible, that the time required remained approx. the same, and that the no. of tentacles regenerating tended to diminish. W. H. N.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V. N. Cand. Biolog. Sci.

Dissertation: "Role of Various Tissue Components in the Process of Growth (Data on the Theory of Growth)." Second Moscow State Medical Inst imeni I. V. Stalin, 29 Sep 47.

SO: Vechernyaya Moskva, Sep 47 (Project #17836)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

BLYAKHER, L.Ya.; DOBROKHOTOV, V.N.

Zonal and focal distribution of mitosis in mouse adenocarcinoma. Doklady Akad. nauk SSSR 78 no.3:581-584 21 May 1951. (CLML 20:9)

1. Institute of Experimental Biology of the Academy of Medical Sciences USSR. 2. Presented by Academician A.I. Abrikosov 22 March 1951.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

L-O BROK

VLAYAKHER, L.Ya.; DOBROKHOTOV, V.N.

Further investigations on the topography of mitosis of mouse carcinoma; structure of mitotic foci. Doklady Akad. nauk SSSR 81 no.6:1143-1145 21 Dec 51. (CIML 21:5)

1. Presented by Academician A.I. Abrikosov 30 October 1951.
2. Institute of Experimental Biology, Academy of Medical Sciences USSR.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

USSR/Medicine - Oncology FD-2264

Card 1/1 Pub 17-15/20

Author : Dobrokhotov, V. N.

Title : Effect of anti-cancer serum on cell division of cancerous tumors

Periodical : Byul. eksp. biol. i med. 3, 59-62, Mar 1955

Abstract : Investigated the effect of anti-cancer serum on the rate of mitotic cell division of adenocarcinomas in mice. Two references; both USSR, since 1940.

Institution: Laboratory of the Chemistry of Immunity (Head-Prof. V. S. Gostev) and Laboratory of Histophysiology (Acting Head - V. N. Dobrokhotov, Kand. Biological Sc.) of the Institute of Experimental Biology of the Academy of Medical Sciences USSR (Director-Prof. I. N. Mayskiy)

Submitted : 21 June 1954 by N. N. Zhukov-Verezhnikov, Member of the Academy of Medical Sciences USSR

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

COUNTRY : USSR
CATEGORY : Cultivated Plants. General Problems. M

ABS. JOUR. : RZhBiol., No. 3, 1959, No. 10849

AUTHOR : Dobrokhotov, V. N.
INST. : Penza Agricultural Institute.
TITLE : On the Vigor of the Initial Growth of the Seeds.

ORIG. PUB. : Sb. tr. Penzensk. s.-kh. in-ta, 1958, vyp. 2, 168-181

ABSTRACT : A description of a device for the determination of the vigor of the initial seed growth and the method of the procedure with the device. Results of the study illustrated with photographs are cited.

CARD: 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

LIOZNER, L.D., DOBROKHOTOV, V.N.

Conference on problems in regeneration and cellular reproduction.
Vest. AMN SSSR 13 no.5:66-73 '58 (MIRA 11:6)
(REGENERATION (BIOLOGY))
(CELL DIVISION (BIOLOGY))

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

LIOZNER, L.D., prof., DOBROKHOTOV, V.N., kand.biol. nauk

Physiological regeneration and some trends in its study.
Vest.AMN. SSSR 13 no.11:41-50 '58 (MIRA 11:12)
(REGENERATION (biology)
review (Rus))

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N., LIOZNER, L.D.

Results of the conference on problems of regeneration and cellular multiplication. Usp.sovr.biol. 45 no.3:388-392 My-Je '58 (MIRA 11:8)
(REGENERATION (BIOLOGY))
(CELLS)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

BOGOYAVLENSKAYA, N.V., DOBROKHOTOV, V.N.

Effect of adrenalin on mitotic division, respiration and glycolysis in the cornea and intestinal mucous membrane of rats. [with summary in English]. Biul.eksp.biol. i med. 46 no.8:104-108 Ag '58 (MIRA 11:10)

1. Iz laboratorii biokhimii (zav. - doktor khim. nauk V.S. Tongur) i laboratorii gistofiziologii (zav. - kand.biol. nauk V.N. Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof. I.N. Maysky) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

(EPINEPHRINE, eff
on glycolysis, mitosis & resp. in cornea & intestinal mucous membrane of rats (Rus))
(CORNEA, eff. of drugs on epinephrine on glycolysis, mitosis & resp., in rats (Rus))
(INTESTINES, eff. of drugs on
epinephrine on glycolysis, mitosis & resp. of mucous membrane inrats (Rus))
(CARBOHYDRATES, metab.
glycolysis in cornea & intestinal mucous membrane, eff. of epinephrine in rats (Rus))

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

LIOZNER, L.D.; DOBROKHOTOV, V.N.

Results of the conference on problems of physiological regeneration. Usp.sovr.biol. 48 no.2:239-244 S-O '59. (MIRA 13:3)
(REGENERATION (BIOLOGY)--CONGRESSES)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

SEL'TSKOVSKIY, P.L., prof.; DOBROKHOTOVA, V.N.

Analysis of mortality in aged patients after operative surgery.
Khirurgiia 36 no.10:79-84 O '60. (MIRA 13:11)

1. Iz Moskovskogo meditsinskogo stomatologicheskogo instituta
(dir. - dotsent G.N. Beletskiy)
(OPERATIONS, SURGICAL) (MORTALITY)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, Vasiliy Nikolayevich, doktor sel'khoz. nauk, prof.; TETIUREVA, I.V., red.; PEVZNER, V.I., tekhn. red.

[Weed seeds] Semena sornykh rastenii. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 413 p. illus. (MIRA 15:2)

(Seeds) (Weeds)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

LIOZNER, L.D.; DOBROKHOTOV, V.N.

Second conference on regeneration and cell multiplication. Usp. sovr.biol. 51 no.3:391-396 My-Je '61. (MIRA 14:6)
(REGENERATION (BIOLOGY)—CONGRESSES)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.; BABAYEVA, A.G.; KURDYUMOVA, A.G.

Mitotic activity of cells of the liver and the outer orbital gland in white rats. Dokl. AN SSSR 142 no.2:458-461 Ja '62. (MIRA 15:2)

1. Institut eksperimental'noy biologii AMN SSSR. Predstavleno akademikom A.N.Bakulevym.
(KARYOKINESIS)
(LIVER)
(LACRIMAL ORGANS)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.; NIKANOROVA, R.I.

24-hour periodicity of mitotic cell division in the adrenal glands of white rats. Biul. eksp. biol. i med. 54 no.9: 91-96 S '62. (MIRA 17:9)

1. Iz laboratorii gistofiziologii (zav.- kand. biologicheskikh nauk V.N. Dobrokhotov) Instituta eksperimental'noy biologii (dir.- prof. I.N. Mayskin) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

MAYSKIY, I.N., glav. red.; TONGUR, V.S., nauchn. red.; BOGOYAVLENSKAYA, N.V., nauchn. red.; VYAZOV, O.Ye., red.; GEORGIYEV, O.Ye., red.; DEBOV, S.S., red.; DOBROKHOTOV, V.N., red.; ZHUKOV-VEREZHNIKOV, N.N., red.; LAGUCHEV, S.S., red.; LIOZNER, L.D., red.; LOMAKIN, M.S., red.; PEKHOV, A.P., red.; TONGUR, V.S., red.; GOSTEV, V.S., red.

[Nucleic acids and nucleoproteins; transactions] Nukleinovye kisloty i nukleoproteidy; trudy. Pod red. I.N Maiskogo, Tongura, V.S i N.V.Bogoiavlenskoi. Moskva, Mosk. biokhim. ob-vo, 1961. 345 p. (MIRA 17:9)

1. Konferentsiya po nukleinovym kislotam i nukleoproteidam. 1st, Moscow, 1959. 2. Institut eksperimental'noy biologii AMN (for Tongur, ostev). 3. Pervyy Meditsinskiy institut imeni I.M.Sechenova, Moskva (for Debov).

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.; KURDYUMOVA, A.G.

24-hour periodicity of mitotic division of cells in the epithelium of the esophagus of white rats. Biul. eksp. biol. i med. 54 no.8: 81-84 Ag '62. (MIRA 17:11)

1. Iz laboratorii gistofiziologii (zav. V.N. Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.

Significance of regularities in the daily periodicity of cellular multiplication. Vestn. Akad. med. nauk SSSR 18 no.7: 50-62 '63 (MIRA 17:2)

1. Institut eksperimental'noy biologii AMN SSSR.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

AVTSYN, A.P.; DOBROKHOTOV, V.N.; LIOZNER, L.D.

Third Conference on problems of regeneration and cell division. A.P. Avtsyn, V.N. Dobrokhotov, L.D. Liozner. Vestn. Akad. med. nauk SSSR 18 no.7:93-101 '63 (MIRA 17:2)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.; MARKELOVA, I.V.; SOKOLOVA, L.V.; TIMASHKEVICH, T.B.; NIKANOROVA, R.I.; KURDYUMOVA, A.G.

Effect of the time of injection of sarcolysine on the change in the mitotic activity of the tissues of white rats. Trudy MOIP. Otd. biol. 11:165-185 '64. (MIRA 18:1)

1. Laboratoriya gistofiziologii Instituta eksperimental'noy biologii AMN SSSR.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.; MARKELOVA, I.V., SOKOLOVA, L.V., TIMASHKEVICH, T.V.; NIKANOROVA, R.I.; KURDYUMOVA, A.G.

Effect of sarkolysine on the 24-hour periodicity of mitoses in some tissues of white rats. Biul. eksp. biol. i med. 57 no.3: 97-102 Mr '64.

(MIRA 17:11)

1. Laboratoriya gistofiziologii (zav. - kand. biol. nauk V.N. Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, V.N.; LIOZNER, L.D.

Conference on amitosis. TSitologiia 5 no.5:598-600 S-O '62.
(MIRA 18:5)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

S/122/60/000/008/004/006
A161/A029

1.1200

AUTHOR: Dobrokhotov, V.P., Engineer

TITLE: Determination of Extrusion Effort Taking Into Account the Deformation Rate

PERIODICAL: Vestnik mashinostroyeniya, 1960, No. 8, pp. 45-49

TEXT: The extrusion process is mathematically analyzed using data of eight sources (Ref.1-8) and formulae are derived for calculating the specific pressure (29) and full extrusion effort during a steady extrusion process (30) without considering the external friction, nonuniformity of heated metal properties through the cross section area and cooling during deformation. As the effect of these three factors cannot be ignored in the real extrusion process, the following correction coefficients are used: m, φ and β. The coefficient m is calculated using the formula (31) which includes the external friction coefficient μ determined by S.I. Gubkin (Ref. 7) for extrusion through a conical die with graphite-oil lubricant. According to Gubkin $\mu = 0.3$ for this case. The coefficient φ can be assumed as being equal to 1.7 according to Gubkin, and allowance for cooling of the blank in transportation and during deformation can be made by formula (32) derived by the author in experiments. A

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Determination of Extrusion Effort Taking Into Account the Deformation Rate

curve is plotted presenting the β value graphically. The final specific pressure formula (33) includes the correction coefficients. Laboratory experiments proved it being sufficiently accurate for practical use. There are 6 figures and 8 references: 6 Soviet, 2 English.

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S/122/60/000/008/004/006
D217/D305

AUTHOR: Dobrokhotov, V.P., Engineer

TITLE: Determination of extrusion effort taking into account the rate of deformation

PERIODICAL: Vestnik mashinostroyeniya, no. 8, 1960, 45-49

TEXT: A formula for the specific pressure of ideal extrusion is derived for steels of which St. 3 is typical. Coefficients are then introduced to account for friction, non-uniform properties and cooling of the charge. It has been proved by A. Nadai (Ref. 2: Plastichnost' i razrushayemost' tverdykh tel (Plasticity and Failure of Hard Bodies) Izdatel'stvo inostrannoy literatury, 1954) and by G. Eyring (Ref. 3: "The Creep and Static Flow of Solid Materials", National Academy of Sciences, Autumn meeting, 1947) that relationship between shearing stress τ and rate of shearing deformation u is of the logarithmic form

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$$\tau = C_1 + C_2 \ln u, \qquad (1)$$

where C_1 and C_2 are constants. From P.M. Kachanov (Ref. 4: Osnovy teorii plastichnosti (Fundamentals of the Theory of Plasticity), GITTL, 1956) it follows that for compression or tension,

$$v_{oct} = 1.41\, v_d \qquad (5)$$

where v_d = rate of deformation in sec^{-1}; v_{oct} = rate of octahedral shear. On the basis of Ye.N. Moshnin and D.I. Berezhkovskiy (Ref. 5: Sb. "Inzhenernyye metody rascheta tekhnologicheskikh protsessov obrabotki metallov davleniyem" (Journal: Engineering Calculation Methods for Technological Processes of Machining Metals by Pressure), pod red. V.S. Smirnova, Mashgiz, 1957) and M.A. Zaykov (Ref. 6: Zhurnal tekhnicheskoy fiziki (Journal of Technical Physics), T. XIX, vyp. 6, 1949) a formula for the limit of plasticity is derived,

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

Determination of extrusion ...

$$\sigma_s^* = \sigma_s + \eta \ln \frac{v_{oct}}{v'_{oct}}, \qquad (17)$$

where v'_{oct} = rate of octahedral shear, obtained during the laboratory determination of σ_s, in sec.$^{-1}$; v_{oct} = given rate of octahedral shear in sec.$^{-1}$; σ_s^* = limit of plasticity at given temperature and rate conditions in kg/mm^2; σ_s = plasticity limit determined in a laboratory at the given temperature and at a small rate of deformation at the same temperature in kg/mm^2; η = coefficient. For the temperature interval 950-1150°C the author found that

$$\eta = 0.74 - (t - 900) \cdot 0.0008.$$

For an ideal (frictionless) oxisymmetrical extrusion, the author states

$$d\sigma_\rho = 2\sigma_s^* \frac{d\rho}{\rho}, \qquad (18)$$

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

Determination of extrusion ...

where ρ = radius-vector; σ_ρ = principal (radial) stress. The author then shows in Fig. 4 --

Fig. 4 -- the changes in the displacement rate of a volume element in an ideal process of extrusion.

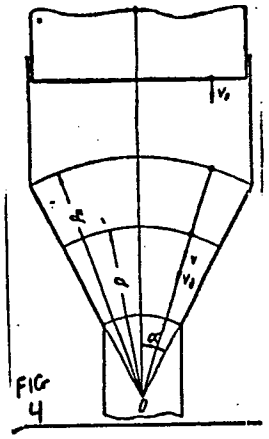

Рис. 4. Характер изменения скорости перемещения элементарного объема при идеальном процессе выдавливания.

Card 4/9

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In the process, points of equal velocities will be spherical surfaces with center O (see Fig. 4) and a volume element will move radially with velocity v_ρ:

$$v_\rho = \frac{v_o F_n}{2\pi (1 - \cos\alpha)} \cdot \frac{1}{\rho^2}, \qquad (19)$$

where F_n = cross-sectional area of the receiver; α = semi-cone angle of the die funnel. Now, since the velocity of radial deformation v_d is

$$v_\partial = \frac{d\varepsilon}{dk} = \frac{dFv_\rho}{Fd\rho}, \qquad (20) \text{ and } (21)$$

where ε = relative radial deformation and k = time, the following equation for the principal stress σ_ρ (which is the same as the specific pressure of extrusion q') is obtained with the aid of Eq. (5),

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$$\left(\text{при } \rho = \rho_n = \frac{\sqrt{F_n}}{r\ \pi \sin\alpha}\right)$$

$$\sigma_\rho = \sigma_s \ln\frac{F_n}{F_M} + \left(\eta \ln\frac{v_{okm}^{mt}}{v_{okm}^{ost}} + 0{,}75\eta \cdot \ln\frac{F_n}{F_M}\right) \ln\frac{F_n}{F_M}. \quad (27)$$

where F_m = cross-sectional area of extrusion. For a real process, coefficients m, ψ and β are introduced in accordance with S.I. Gubkin (Ref. 7: "Inzhenernye metody rascheta tekhnologicheskikh protsessov obrabotki metallov davleniyem" (Engineering Calculation Methods for Technological Processes of Machining Metals by Pressure), pod red. V.S. Smirnova, Mashgiz, 1957) and (Ref. 8: Teoriya obrabotki metallov davleniyem (Theory of Machining Metals by Pressure), Mashgiz, 1947). Coefficient m allows for friction and is determined by

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Determination of extrusion ...

$$m = \frac{\left(1 + \frac{tg\,\alpha}{\mu}\right)\left[\left(\frac{F_n}{F_m}\right)^{\frac{\mu}{tg\,\alpha}} - 1\right]}{\ln \frac{F_n}{F_m}}, \qquad (31)$$

where μ = coefficient of external friction (for lubrication with graphite grease $\mu = 0.3$) (Ref. 7: Op.cit.). $\psi = 1.7$ allows for non-uniform properties of the charge and β corrects for cooling of the charge during its transfer and deformation (Ref. 7: Op. cit.), and may be determined from

$$\beta = f(\gamma) = f\left(0.282 \frac{b_o}{H_o} \sqrt{F_n}\right), \qquad (32)$$

where b_o = linear dimension of charge (diameter or wall thickness in the case of a tube); H_o = height of the charge or its trigger

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dimension. The value of β as obtained by the author is given in graphic form, Fig. 6 --

Fig. 6 -- Graph of value of correcting coefficient β.

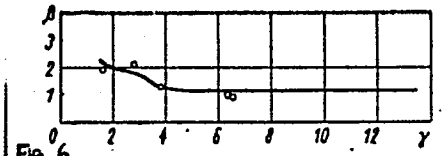

Fig. 6
Рис. 6. График значения поправочного коэффициента β.

The final formula (which has thus been proven) for the pressure of extrusion is therefore

$$q = 1.7m\beta \left[\sigma_s \ln \frac{F_n}{F_m} + \left(\eta \ln \frac{v_{oct}}{v'_{oct}} + 0.75\eta \cdot \ln \frac{F_n}{F_m} \right) \ln \frac{F_n}{F_m} \right] \quad (33)$$

The author concludes by pointing out that as laboratory test

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showed, the recommended formula ensures results which are sufficiently accurate for practical work. There are 8 references, 6 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: Proceedings. Conference on the Properties of Materials, Sess. 3, paper 2, London, May 1957; G. Eyring, the Creep and Plastic Flow of Solid Materials, National Academy of Sciences autumn meeting, 1947.

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DOBROKHOTOV, V.P., inzh.; KOVALEV, L.K.., kand.tekhn.nauk

Complete characteristics of technological properties of lubricants used in pressworking metals. Vest.mash. 41 no.3:61-63 Mr '61.
(MIRA 14:3)
(Metalworking lubricants)

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OPARIN, A.I., akademik; STUDITSKIY, A.N., prof.; NAUMOV, N.P., prof.; KOVAL'SKIY, V.V.; YUROVA, I.L., dots.; PLATONOV, G.V., prof.; KAGANOV, V.M.; FURMAN, A.Ye., dots.; MEDVEDEV, N.V., prof.; YAKIMOV, V.P., kand. biol. nauk; ZHUKOV-VEREZHNIKOV, N.N.; BONDARENKO, P.P., prof.; MAYSKIY, I.N., prof.; TRIBULEV, G.P., dots.; TSAREGORODTSEV, G.I., dots.; DOBROKHVALOV, V.P., kand. biol. nauk; YAZDOVSKIY, V.I., prof.; VIKTOROVA, V., red.; CHEREMNYKH, I., mlad. red.; ULANOVA, L., tekhn.red.

[Studies on the dialectic of living nature] Ocherk dialektiki zhivoi prirody. Moskva, Sotsekgiz, 1963. 527 p. (MIRA 16:12)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Koval'skiy).
2. Deystvitel'nyy chlen AMN SSSR (for Zhukov-Verezhnikov).
(Biology--Philosophy)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, Ye., kandidat tekhnicheskikh nauk.

Methods of operating an automobile economically under difficult road conditions. Avt.transp. 32 no.8:12-13 Ag '54. (MLRA 7:11)
(Automobiles)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

DOBROKHOTOV, E. I., IVANOV, D. P., MUKHOVATOV, V. S., KIRILLOV, V. D., PETROV, D. P., RAZUMOVA, K. A., STRELKOV, V. S., SHEPELEV, M. N. and YAVLINSKIY, N. A.

"Investigation of Plasma Heating in Toroidal Chambers."

paper to be presented at the 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

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...khotov, Ye. I.

C-5

Catogory : USSR/Nuclear Physics - Nuclear Reactions

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6075

Author : Artsimovich, L.A., Andrienov, A.M., Dobrokhotov, Ye.I., Luk'yanov, S.Yu., Podgornyy, I.M., Sinitsyn, V.I., Filippov, N.V.

Title : Hard Radiation from Pulse Discharges.

Orig Pub : Atom. energyia, 1956, No 3, 84-87

Abstract : It was observed that high-power pulse discharges in light gases can be sources of hard radiation. In 1952 the authors detected neutron radiation accompanying pulse discharges in D_2. The discharges were carried out in cylindrical tubes 20 -- 40 cm in diameter, 50 -- 100 cm long. The current reached several hundreds of kiloamperes, and its rate of rise amounted to 5×10^{10} -- 1.5×10^{11} amp/sec. Silver targets were placed in paraffin blocks and scintillation counters were used to count the neutrons. In discharge tubes with porcelain walls, neutron emission is observed if the initial pressure of D_2 ranges from 0.01 to 0.3 mm Hg, while in tubes with metal sidewalls the emission is observed up to 10 mm. At a maximum

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rounded by a liquid scintillator. Two installations, one
[illegible] background and the other [illegible]

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DOBROKHOTOV, Ye.I.

"Investigation on Plasma Heating in Toroidal Chambers"
(a paper to be presented at 1958 UN "Atoms for Peace"
Conference, Geneva).

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21(8)

AUTHORS: Dobrokhotov, Ye. I., Lazarenko, V. R., Luk'yanov, S. Yu.

SOV/56-36-1-12/62

TITLE: The Search for the Double β-Decay in Ca^{48} (Poiski dvoynogo β-raspada v Ca^{48})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 1, pp 76-87 (USSR)

ABSTRACT: In the introduction, the results obtained by publications by other authors, which concerned this subject, (Refs 1-6) are discussed. For their investigations the authors used a sample enriched up to 72.2 % with Ca^{48}, which contained 423 mg Ca^{48}; the control sample was enriched with Ca^{44} up to 94.7 %. Both samples consisted of calcium fluoride powder pressed into thin discs (diameter: 37 mm); the discs were covered by aluminum foils (30μ) and were set in aluminum rings. The impurities in the samples amounted to less than 0.02 %. The measuring arrangement and the electronic device are described in detail by a schematical drawing and a block scheme, and so are the gauging of the scintillation counters, between which the samples were alternatingly located (Fig 1). Energy-gauging was carried out by means of the conversion lines of Ba^{137} (0.625 MeV).

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Furthermore, the control tests and, finally, measurements themselves were discussed. The latter were carried out in two series from December 1956 to January 1957, and from July to August 1957. The energy interval within which the search for double β-decays was carried out depends on the decay energy and on the electron energy losses in the sample. The decay energy for Ca^{48} is known from mass-spectroscopic measurements (Ref 14) as amounting to (4.3 ± 0.1) MeV. The errors occurring in investigations are estimated as amounting to 1) ±5.6 % as a result of amplitude scattering (straggling, spread) by each scintillation counter, 2) ±3 % as a result of errors in counter energy calibration, 3) ±1.5 % because of instability of intensification, 4) ±1.5 % as a result of errors committed when measuring the film. The spectra of total electron energy was analyzed in the domain 3.0-4.4 MeV. In the course of 730 hours 11 cases of coincidence were recorded in this interval if the sample enriched with Ca^{48} was between the counters, 12 cases of coincidence at Ca^{44}. The difference "Ca^{48} - Ca^{44}" is therefore $(-1\pm4.8)/730$ imp/h, i.e. $(-0.14\pm0.66)/100$ imp/h ($= \Delta n$). The half-life is determined from the formula

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The Search for the Double β-Decay in Ca^{48} SOV/56-36-1-12/62

$\tau = \ln 2 \frac{N_o}{A} \frac{km\eta}{\Delta n}$, where m denotes the materialing of which the samples are made, A - the mass number, N_o - Avogadro's Number, k and η - coefficients. $\tau = (0.9/\Delta n).10^{19}$a, i.e. one obtains $\tau_{Ca^{48}} \geq 0.7.10^{19}$a.

The following results were obtained by previous investigations carried out with scintillation counters:
McCarthy (Mak-Karti) (Ref 16): $1.1.10^{17}$a (1955)
The authors in a previous paper (Ref 13): $> 1.10^{18}$a (1956)
Awshalom(Avshalom)(Ref 17): $\geq 2.10^{18}$a (1956)

The authors finally thank I. S. Shapiro for discussions, I. V. Galkin for establishing the electronic plant, and K. S. Mikhaylov for preparing the scintillators.There are 11 figures, 2 tables, and 17 references, 10 of which are Soviet.

SUBMITTED: September 6, 1958

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410610020-7

AUTHOR: Dobrokhotov, Ye., I. (Moscow) SOV/26-59-1-26/34

TITLE: Problems of Controlling Thermonuclear Processes (Problemy upravleniya termoyadernymi protsessami)

PERIODICAL: Priroda, 1959, Nr 1, pp 103 - 108 (USSR)

ABSTRACT: An important part of the Second Geneva Conference was concerned with the control of thermonuclear processes. I.V. Kurchatov conveyed to the congress the message of the Soviet government to lift the ban of secrecy from all research in the field of controlled thermonuclear processes. L.A. Artsimovich pointed out that the problems involved in this research are possibly more difficult than was foreseen. American and Soviet research in the field of controlled thermonuclear processes is approximately on the same lines, with only slight differences in the applied methods. B.I. Trubnikov's theoretical findings on the source of the energy loss of hot plasma in a magnetic field, such as the magnetic radiation of electrons, impressed the learned listeners of the conference. S.Yu. Luk'yanov and V.I.

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Problems of Controlling Thermonuclear Processes

Sinitsyn reported on their spectroscopic method of plasma investigation. A.M. Andrianov presented results of the joint work of Soviet physicists on the characteristics of pulsed discharges with a very fast increase in current. A setup used in connection with plasma loops formed with the current in the gas in a special configuration of a fast-changing, magnetic field is based on an idea of S.M. Osovets and was described to the participants in the conference. Investigations made by Soviet physicists under the direction of N.A. Yavlenskiy on an electrodeless annular discharge, stabilized by a weak magnetic field, showed that a stable string of plasma without interaction with the chamber walls could not be obtained. The Soviet "ion magnetron" (Figure 3) and a recently built ion trap of 12 m length and a diameter of 1.4m

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that accelerates molecular ions of deuterium to an energy of 200 Kev were also described to the members of the conference. There are 3 photos and 1 Soviet reference.

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ACCESSION NR: AT5022106 UR/3136/64/000/780/0001/0043

AUTHORS: Vlasov, M. A.; Dobrokhotov, Ye. I.; Zharinov, A. V.

TITLE: Instability of electric discharge in a magnetic field in the presence of a heated cathode, at low pressures

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-780, 1964. Neustoychivost' razryada s nakalennym katodom v magnitnom pole pri nizkikh davleniyakh, 1-43

TOPIC TAGS: plasma magnetic field interaction, plasma rotation, plasma beam instability, plasma research, plasma instability

ABSTRACT: The behavior of an electric discharge in a magnetic field in the presence of a heated cathode at low pressures was studied. The maximum magnetic field strength was 2000 oersted and the gas pressure varied from 2×10^{-16} to 10^{-4} mm Hg. The gases used were A, H_2 and N_2. The experimental installation is shown schematically in Fig. 1 on the Enclosure. It was found that: 1) the plasma beam had a negative charge with respect to the walls of the discharge chamber; 2) a stationary rotating magnetic "flare" formed in the plasma; the direction of rotation was toward the electron side; 3) the formation of the spinning flare was pressure dependent and was not observed to form for pressures higher than P* (for A and N_2, P* = was 5.6

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and 5.8 x 10^{-5} mm Hg respectively); 4) the instability was caused by the drift of particles in the crossed magnetic and electric fields created as a result of polarization. For systems characterized by end-loss of particles such an instability was observed to be pressure dependent and arose only at pressures higher than P_{or} (for A, N_2, and H_2, P_{or} is 0.84, 0.74, and 10 x 10^{-5} mm Hg respectively). By assuming that the observed rotation of the discharge beam is due to the overall plasma rotation expressions for the electric field as a function of the pressure

$$U_z^* = U_{ez} \ln\left[\gamma\sqrt{\frac{U_a}{U_{ez}}}\,\frac{1}{n_0\sigma_i v_{ei}\frac{L}{v_i}-1}\right]$$

and for the frequency of flare spin

$$f_D(kHz) = C_1\frac{E_a H}{C_2 E_a A + a H^2}$$ were derived,

where U*z is the retarding potential corresponding to P*, Ua and Uez the energy of primary and secondary electrons, n_0 the neutral gas density, σ_i ionization cross section, v_{ei} and v_i velocity of primary electrons and ions, L length of discharge,

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ACCESSION NR: AT5022106 3

f_D(kHz) is the frequency of flare spin, C_1 and C_2 are constants equal to 3×10^4 and 2×10^4 respectively, E_a field strength at boundary of beam, H the magnetic field strength, a the beam radius, and A the atomic weight of the ions. Both expressions are in good qualitative agreement with experimental results. The dependence of flare spin frequency on the retarding potential is shown graphically in Fig. 2 on the Enclosure. Orig. art. has: 1 table and 22 graphs.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova (Institute for Atomic Energy) 44,55

SUBMITTED: 00 ENCL: 03 SUB CODE: NP

NO REF SOV: 001 OTHER: 005

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ENCLOSURE: 01

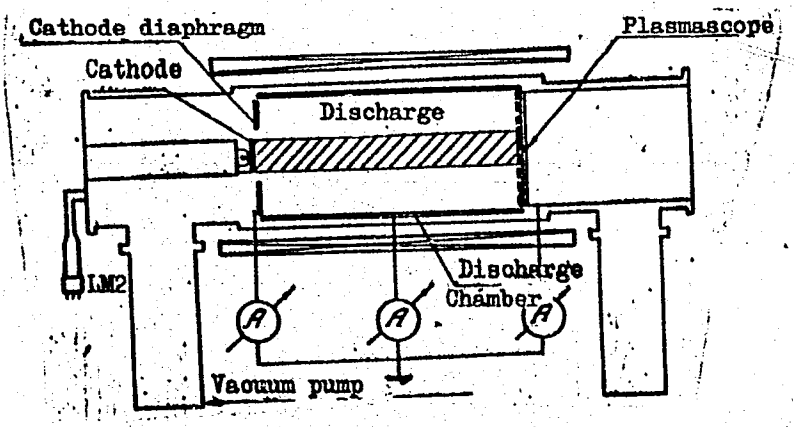

Fig. 1. Schematic of the experimental installation.

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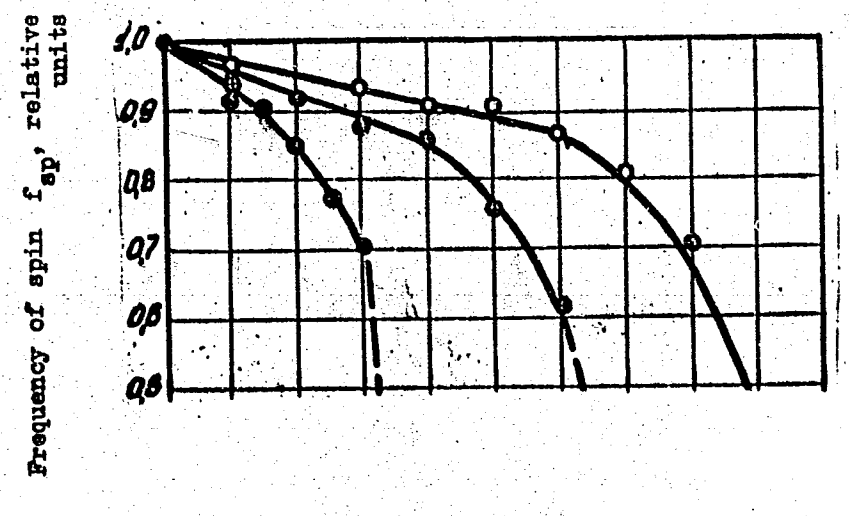

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